

The disclosure relates to a device for comparing two words, N and P, of n bits each. The device includes at least one comparator block comprising n basic comparator blocks which can each be used to compare bits N_i and P_i of digit place i of words N and P, whereby $0 \leq i \leq n-1$. Moreover, each basic comparator block comprises: a first sub-block which can be used to generate a first signal indicating whether or not bits N_i and P_i are equal, said signal being generated at the output of the sub-block forming a first output (OUT_XOR_i) of the basic comparator block; a second sub-block which can be used to generate a second signal indicating which enables the second signal to pass to a second output (SOUT_i) of the basic comparator block if the first signal indicates that bits N_i and P_i are not equal and which, in the opposite case, enables the second signal to be blocked. The comparator block also comprises: means for generating a third signal at a first output (OUT_XOR_{4_b}) of the comparator block, indicating that numbers N and P are equal if the n first signals indicate same; and first selective passage means which can be used selectively to connect the second output (SOUT_i) of a basic comparator block to a second output (OUT_COMP₄) of the comparator block, whereby said basic comparator block, from among the basic comparator blocks having a second signal at the output thereof, processes the most significant bits. The signal present at the second output of the comparator block indicates which of the numbers, N or P, is greater.